



UNITED STATES PATENT AND TRADEMARK OFFICE

EM

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/015,626 | 12/17/2001 | Tohru Takahashi | 217190US2S | 7544 |
| 22850 | 7590 | 02/23/2004 | EXAMINER | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | COLON, GERMAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2879 | |

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/015,626 | TAKAHASHI ET AL. | |
| | Examiner | Art Unit | |
| | German Colón | 2879 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 3-13 and 16 is/are allowed.
- 6) ☒ Claim(s) 14, 15, 17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The Amendment, filed on December 03, 2003, has been entered and acknowledged by the Examiner.
2. Cancellation of claim 2 has been entered.
3. Addition of claims 17 and 18 has been entered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 14 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for “an auxiliary mask having a number of apertures communicating *individually* with the apertures of the effective portion of the shadow mask”, does not reasonably provide enablement for “the apertures of the auxiliary mask having a minor-axis-direction diameter twice or more as large as the minor-axis-direction diameter of each aperture of the shadow mask, while providing an *individual* communication with the apertures of said shadow mask”. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Claim 15 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for “an auxiliary mask having a number of apertures communicating

Art Unit: 2879

individually with the apertures of the effective portion of the shadow mask”, does not reasonably provide enablement for “the bridge portions of the auxiliary mask being located individually on the bridge portions of the shadow mask body as to be shifted in the direction of the minor axis by a margin equal to $\frac{1}{2}$ of the minor-axis-direction space between the electron beam passage apertures of the auxiliary mask, while providing an *individual* communication with the apertures of said shadow mask”. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

In regards to claims 17 and 18, said claims are rejected over the reasons stated in the rejection of claims 14 and 15, respectively.

Allowable Subject Matter

6. Claims 1, 3-13 and 16 are allowed.

7. The following is a statement of reasons for the indication of allowable subject matter:

Claims 1, 3-13 and 16 are allowable for the reasons given in the Office Action mailed September 03, 2003, in light of the amendment filed December 03, 2003.

Response to Arguments

8. Applicant's arguments filed December 03, 2003 have been fully considered but they are not persuasive.

Applicant argues that the rejection of claims 14 and 15 is based on a misreading of the claim language and support for the subject matter is provided on the Figures and the

Art Unit: 2879

Specification. Further, Applicant argues that the limitation of “while providing an individual communication with the apertures of the shadow mask” is not included in said claims (see Remarks, page 12, lines 2-3).

The Examiner concedes that Fig. 9C is consistent with the limitation of “the apertures of the auxiliary mask having a minor-axis-direction diameter twice or more as large as the minor-axis-direction diameter of each electron beam passage aperture of the shadow mask body,..., *the bridge portions of the auxiliary mask being superposed individually on the bridge portions of the shadow mask body*”, recited in Claim 14. However, contrary to Applicant’s remarks, Claim 14 also requires “the auxiliary mask having a number of electron beam passage apertures communicating individually with the electron beam passage apertures of the effective portion [of the shadow mask]”. The Examiner notes that Claim 14 is dependent on Claim 1, therefore, it includes all the limitations of independent Claim 1.

The Examiner addresses Applicant’s attention to the Arguments/Remarks filed May 02, 2003, Page 4, second paragraph. Applicant states (underlining for emphasis):

Also, Yamamoto fails to disclose a number of electron beam passage apertures (of an auxiliary mask) communicating individually with the electron beam passage apertures of the effective portion, as recited in Claim 1. Instead, in Yamamoto, each slot hole 5a or 5b communicates with two other slot holes on the other plate, not another individual slot hole.

It is clear from the above citation that Claim 1 requires the electron beam passage apertures of the auxiliary mask to communicate with *one and only one* electron beam passage aperture of the shadow mask.

Figs. 9C and 10C are consistent with the limitations of Claims 14 and 15, but are not consistent with the limitations of Claim 1. For example, Fig. 9C enables for “bridge portions 27

Art Unit: 2879

of the auxiliary mask being individually superposed on bridge portions 18 of the shadow mask”. However, Fig. 9C does not reasonably provide enablement for “the auxiliary mask having a number of electron beam passage apertures communicating individually with the electron beam passage apertures of the effective portion [of the shadow mask]”. Contrary to Applicant’s Claim 1, Fig. 9C clearly discloses the electron beam passage apertures 26 of the auxiliary mask communicating with *more than one* electron beam passage aperture 12 of the shadow mask.

Likewise, the Drawings and the Specification do not enable one of ordinary skill in the art to make and use the invention recited in Claim 15 and new Claims 17 and 18.

For the reasons given above, the rejection of claims 14, 15, 17 and 18 is deemed proper.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2879

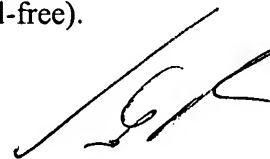
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to German Colón whose telephone number is 571-272-2451. The examiner can normally be reached on Monday thru Thursday, from 8:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


gc



VIP PATEL
PRIMARY EXAMINER